



# THE NAUTILUS

Vol. XLIX

April, 1936

No. 4

## NOTES ON GROWTH OF A JAMAICAN SLUG

BY E. A. ANDREWS

*Where eggs were found.* July 28, 1932, in Jamaica, B. W. I., a batch of large, clear eggs was found under a piece of limestone in a rocky banana patch close to the right of the road leading up from Kingston to Stony Hill. Because the eggs were close to a living *Pleurodonte*, they seemed as if laid by that snail, but when brought to Baltimore, Md., they hatched, August 8-9, as very active little slugs; later identified as *Veronicella laevis* Blainville. The eggs not hatched by Aug. 12 measured 8 by 4 mm. and the young slugs 13 by 4, when actively crawling upon lettuce.

*Methods of rearing and feeding.* The 44 little slugs were kept in a glass jar of 9 litres capacity, with moist towelling paper, slaked lime, some decayed wood and, for food, lettuce, sweet potato, sweet corn, dock leaves, etc. The slugs ate their way into the hard, raw sweet potato in a surprising manner, making round holes into which they disappeared entirely, penetrating as if they were beetle larvae. One was accidentally cut in two, but though the pieces lived many days they did not regenerate.

*Color and habits.* Most of the slugs became grey and developed more or less evident, lengthwise, darker streaks, but a few showed a yellow color, which was possibly a change due to physiological states assumed by the grey ones. In the daytime, the slugs remained inactive, hidden under stones, etc., but at night they ate, and crawled extensively. When a glass cover was used, they often crawled up to the top and remained there. As they seemed to avoid too much wetness, aeration was later provided by cloth or wire screen over the jar top, but they eventually managed to jam themselves under its edge and hence, from time to time, some of them escaped and the numbers fell off, solely from

death outside in the dry laboratory. Over table and floor, the wanderers were traced by their trail of shining slime for 10 to 12 feet and, when found, were generally quite dead and dry. One managed to find a milk bottle containing water and kept alive inside, near the water, until found, several days later. After eating lettuce, the faeces were green or black and dry; they measured a third the length of the animal.

The colorless lower tentacles had a rounded tip, like an eye, but with no colored retina, while near the tip, on the inner face, a side branch constantly felt about, thumb-like, over the substrate. The eyes were yellowish, on stalks 5 mm. long. The locomotor waves along the sole were very interesting.

#### RECORD OF GROWTH

<i>Days after hatching</i>	<i>Condition</i>	<i>Length (in millimeters)</i>	<i>Width</i>	<i>Depth</i>	<i>Numbers</i>
- 15	Eggs .....	6	4	—	—
+ 3	Crawling young .....	13	4	—	—
25	Crawling young .....	26	7	—	42
25	Runts .....	11	4	—	2
37	Resting young .....	32	2	6	41
49	One resting young .....	28	3	4.5	—
	Same one crawling .....	36	7	4	—
	Another resting .....	35	12	7	—
69	Crawling young .....	38	11	6	28
79	.....	29-43	13-26	4-8	9
112	Resting .....	35-53	13-23	3-9	12
133	Crawling .....	46-73	14-23	5-7	12
155	Extended .....	52-68	13-26	4-10	8
175	.....	57-70	13-20	3-10	9
227	.....	40-67	11-20	6.5-9	5
298	Crawling .....	60-78	15-19	7-18	2
336	Sexually mature .....	60	22	9	1

*Increase in weight.* When ten weeks old, three slugs that escaped and dried up completely had then an average weight of 236 milligrams and measured 21, 26 and 30 mm. in length, 8, 8 and 9 in width, and 1, 2 and 2 in depth. When 30 weeks old, five living slugs weighed from 2550 to 4650 milligrams. Two sur-

vivors, 44 weeks old, weighed 5000 and 5200 milligrams; less than a month later, when about a year old, these same two weighed 9700 and 10,000 milligrams.

---

## A NEW POLYGYRA FROM FLORIDA

BY H. A. PILSBRY

Last year Miss Marguerite Robinson spent some time at Pompano, Florida, in company with her father, Mr. Anthony Wayne Robinson, of Haverford, Pa. This place is in Broward Co. about 8 miles north of Ft. Lauderdale. Besides many marine shells, she found snails of the *Polygyra auriculata* group, equalling the largest specimens of that species in diameter, and more obese in figure than any of that group known hitherto. It appears to be a well-marked subspecies of *P. uvulifera*, but much larger and especially higher than typical *uvulifera*. Around Miami I have found only a small form of that species, height 5 mm., diam. 10 to 11 mm.

*Polygyra uvulifera margueritae*, new subspecies. The shell differs from *P. uvulifera* by the much greater elevation of the last whorl, which is decidedly more inflated. It is regularly and strongly striate. Height 9.7 mm., diam. 16.5 mm.; 6½ whorls; type and paratype 166479 ANSP. A smaller paratype measures: height 8.5 mm., diam. 14.8.; barely 6 whorls.

Miss Robinson tells me that the shells were found along a path to the beach which had been cut through the rather thick growth of shrubs, grass, vines and wild flowers, growing on clean white sand. This is about three minutes walk from the main road.

---

## THE EASTERN LIMIT OF SONORELLA

BY H. A. PILSBRY

The eastern limit of *Sonorella* has hitherto been thought to be the Organ Mountains, east of Las Cruces, New Mexico, where C. H. T. Townsend found a specimen in 1897, which reached me through Professor Cockerell.<sup>1</sup> In 1922 Mr. Ferriss and I visited

---

<sup>1</sup> See Proc. Acad. Nat. Sci. Phila. 1905, p. 257; shell and anatomy figured as a variety of *S. hachitana*.